



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/977,984

10/17/2001

Mike Reeves

53921/90

4341

27155 7590 01/25/2006

MCCARTHY TETRAULT LLP  
BOX 48, SUITE 4700,  
66 WELLINGTON STREET WEST  
TORONTO, ON M5K 1E6  
CANADA

EXAMINER

MURPHY, RHONDA L

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/977,984		REEVES ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Rhonda Murphy		2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 12-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This communication is responsive to the amendment filed on 11/11/05. Accordingly, claims 10-11 have been canceled, claims 12-22 have been newly added and claims 1-9 and 12-22 are currently pending in this application.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 9 and 12 - 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba et al. (US 2002/0176370) in view of Kudrimoti et al. (US 6,751,193).

**Regarding claim 1**, Ohba teaches a method of attempting to establish a connection path between first and second nodes in a communications network (page 7, paragraph 108), said method comprising attempting to establish said connection after a period of time has elapsed (page 8, paragraph 121; retransmitting the label allocation message...after a prescribed period of time).

Although Ohba teaches retransmissions at prescribed time periods, Ohba fails to explicitly disclose said time period being greater than a previous interval of delay. However, it would have been obvious to attempt to establish a connection after a

greater period of time than that of the two previous attempts, since an unsuccessful connection resulted from the previous attempts and a greater length of time between the unsuccessful attempts will utilize system resources more efficiently.

Furthermore, Kudrimoti teaches attempting to establish said connection after a period of time has elapsed which is based on a previous interval of delay between two previous attempts and the time period being greater than a previous interval (col. 7, lines 18-24; increase the time between requests after each retry attempt is made).

In view of this, it would have been obvious to one skilled in the art to modify Ohba's method by including a time period being greater than a previous interval, so as to optimize system resources by increasing the time period in which the reconnection attempts are made, thus decreasing the retry attempts and maximizing bandwidth usage.

**Regarding claim 2**, the combined method of Ohba and Kudrimoti teach the method of claim 1 wherein said period of time is greater than said another period of time.

Ohba and Kudrimoti fail to explicitly disclose the period of time being greater than another period of time by a fixed time value.

However, it would have been obvious for the period of time to be greater than another period of time by a fixed time value, so as to reattempt establishing connections at a specific time interval.

**Regarding claim 3**, Ohba teaches a threshold associated with the number of retransmissions (page 8, paragraph 121). Thus, indicating a period of time that does not exceed a maximum time value.

**Regarding claim 4**, Ohba teaches an MPLS system involving the connection of label switched paths (page 1, paragraphs 2 and 4).

Ohba fails to explicitly disclose a soft permanent label switched path.

However, MPLS systems include a label distribution protocol (LDP) that implements soft permanent label switched paths through the use of a network operator. Therefore, it would have been obvious to one skilled in the art to incorporate a connection path that is a soft permanent label switched path, for the purpose of enabling a network operator to automatically establish the path.

**Regarding claim 5**, Ohba teaches retransmitting the label allocation message after a prescribed period of time (page 8, paragraph 121).

Ohba fails to explicitly disclose a time period of 10 seconds.

However, a prescribed time period can be a fixed length of any amount of time. Therefore, it would have been obvious to one skilled in the art to include a fixed time value of ten seconds, so as to initiate retransmission every ten seconds.

**Regarding claim 6**, Ohba teaches a method of timing attempts to establish connections for a plurality of requests for connections in a communication network (page 7, paragraphs 108-109), said method comprising: having a timer arrangement tracking passage of a regular interval of time (page 8, paragraph 121; retransmitting the label allocation message...after a prescribed period of time); having a list of records relating said plurality of requests for connections (page 7, paragraph 110; information stored in tables); selecting one record from said list (page 15, paragraph 219 & 221); attempting

to establish a connection relating to said one record (page 15, paragraph 221; checking flow ID); and if said connection relating to said one record is established, then marking said one record as being successful (page 15, paragraph 225), otherwise, re-attempting to establish said connection at successive intervals increasing by said regular interval (page 8, paragraph 121).

Ohba fails to explicitly increasing the regular interval.

However, it would have been obvious to increase the regular interval when re-attempting to establish a connection, since an unsuccessful connection resulted from the previous attempts and a greater interval of time between the unsuccessful attempts will utilize system resources more efficiently.

Furthermore, Kudrimoti teaches increasing the regular interval (col. 7, lines 18-24; increase the time between requests after each retry attempt is made).

In view of this, it would have been obvious to one skilled in the art to modify Ohba's method by increasing the regular interval, so as to utilize system resources more efficiently by increasing the time period in which retry connection attempts are made.

**Regarding claim 7**, Ohba teaches selecting one record from said list comprising: having a time field in said list of records (page 1, paragraph 7; TTL field); on each said regular interval of time for each entry in said list of records: decrementing a time value in said time field (page 1, paragraph 7; decremented by one); and if said time value is zero for an entry is zero, then selecting said entry as said one record (page 18, paragraph 260; count is 0 and message is transmitted to the next hop node).

**Regarding claim 8**, Ohba teaches retransmitting the label allocation message after a prescribed period of time and a threshold associated with the number of retransmissions (page 8, paragraph 121). Thus, indicating a time interval that does not exceed a maximum time value.

**Regarding claim 9**, Ohba teaches retransmitting the label allocation message after a prescribed period of time (page 8, paragraph 121).

Ohba fails to explicitly disclose a maximum time value of sixty seconds.

However, a prescribed time period can be a time value of any length. Therefore, it would have been obvious to one skilled in the art to include a maximum time value of sixty seconds, so as to initiate retransmission every sixty seconds.

**Regarding claim 12**, Ohba teaches a method of establishing a label switched path (LSP) over an MPLS routing domain established within an IP over ATM network, comprising the steps of:

(a) receiving a LSP setup request for connecting an ingress node in said MPLS routing domain with an egress node (page 5, paragraph 83);

(b) defining a unique LSP ID for said LSP and establishing a signaling link between said ingress and egress node, by creating a label distribution protocol (LDP) session at said ingress node, egress node and each hop along said LSP (page 5, paragraph 83; LDP sessions are known in the art for distributing the labels associated with MPLS networks);

(c) associating all said LDP sessions to said LSP (it is known in the art that LDP sessions are associated with LSP); and

(d) establishing said LSP for transmitting traffic along said LSP between said ingress and egress node (page 5, paragraph 87)

Although Ohba teaches a timing mechanism related to the connection attempts (page 7, paragraphs 102-104), Ohba fails to explicitly disclose providing at said ingress node a retry time based on a back off mechanism for enabling successive attempts to establish said LSP at increasing retry intervals.

However, Kudrimoti teaches a retry time based on a back off mechanism for enabling successive attempts to establish said LSP at increasing retry intervals (col. 7, lines 18-24; increase the time between requests after each retry attempt is made).

In view of this, it would have been obvious to one skilled in the art to modify Ohba's method by including a back off mechanism, so as to utilize system resources more efficiently by increasing the time period in which retry connection attempts are made.

**Regarding claims 13 and 16**, the combined method of Ohba and Kudrimoti teach a back off mechanism for increasing retry intervals. Although Ohba teaches retransmissions at prescribed time periods (page 8, paragraph 121; retransmitting the label allocation message...after a prescribed period of time), Ohba fails to explicitly disclose said retry timer providing an initial retry interval of T seconds, and each next successive retry interval is longer than a previous period of time by T seconds.

Since Kudrimoti teaches a retry timer in which each next successive retry interval is longer than a previous period of time, it would have been obvious for the period of



time to be greater than another period of time by T seconds, so as to reattempt establishing connections at a specific time interval, being T seconds in duration.

**Regarding claim 14**, Ohba further teaches the sum of the increasing retry interval does not exceed a maximum time value (page 8, paragraph 121; a threshold associated with the number of retransmissions; thus, indicating an interval that does not exceed a maximum time value).

**Regarding claim 15**, Ohba teaches said LSP is a signaling LSP (page 1, paragraph 14; it is known in the art that LSPs are signaling LSPs).

**Regarding claim 17**, Ohba teaches said retry timer tracking an interval of time (page 7, paragraph s 102-104), and said step (d) further comprising: selecting one record from a list of records relating to a plurality of requests for connections (page 7, paragraph 105); attempting to establish a connection relating to said one record, said connection being associated with said LSP (page 7, paragraph 108); and if said connection relating to said one record is established, then marking said one record as being successfully connected (page 7, paragraphs 108-109).

Although Ohba teaches retransmissions at prescribed time periods (page 8, paragraph 121), Ohba fails to explicitly disclose said increasing retry interval being greater than a last retry interval by said regular interval of time.

However, Kudrimoti teaches re-attempting to establish said connection at said increasing retry intervals, each of said successive increasing retry interval being greater than a last retry interval by said regular interval of time (col. 7, lines 18-24).

In view of this, it would have been obvious to one skilled in the art to modify Ohba's method by increasing the retry interval, so as to utilize system resources more efficiently by increasing the time period in which retry connection attempts are made.

**Regarding claim 18**, Ohba teaches each record of said list of records including a respective time field (page 7, paragraph 105); and said selecting one record from said list comprises, at each said increasing retry interval and for said each record in said list of records (page 8, paragraph 121): decrementing a time value stored in said each respective time field (page 7, paragraph 112-114); and if the time value for any said each respective time field is zero, then selecting the record associated with the any said each respective time field as said one record (page 7, paragraph 112-114).

**Regarding claims 19 and 20**, Ohba further teaches reattempting to establish said connection occurs only if the sum of the increasing retry intervals does not exceed a maximum time value (page 8, paragraph 121). Furthermore, Ohba teaches a prescribed time period. Prescribed time periods can be a time value of any length. Therefore, it would have been obvious for the maximum time value to be sixty seconds, so as to initiate retransmission every sixty seconds.

**Regarding claim 21**, Ohba teaches said step (b) comprises: establishing at least another signaling link between said ingress and egress node, and selecting one of said signaling link and said another signaling link utilizing a round robin algorithm (page 8, paragraph 127).

**Regarding claim 22**, Ohba teaches not selecting any of said signaling links whenever said network does not have sufficient resources for establishing one of said signaling

links (it would have been obvious to not select any signaling links when the network does not have sufficient resources, since the network would be incapable of fully supporting the signaling information).

### ***Response to Arguments***

Applicant's arguments filed 11/11/05 have been fully considered but they are not persuasive. Examiner respectfully disagrees with applicant's arguments relating to Ohba's teaching of establishing a connection after a period of time has elapsed. As stated in the previous office action, since Ohba teaches retransmissions at prescribed time periods, it would have been obvious for the prescribed time periods to be of a specific value. As additional support for the amended claim 1, Kudrimoti et al. (US 6,751,193) teaches attempting to establish said connection after a period of time has elapsed which is based on a previous interval of delay between two previous attempts and the time period being greater than a previous interval (col. 7, lines 18-24; increase the time between requests after each retry attempt is made).

### ***Conclusion***

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda Murphy whose telephone number is (571) 272-3185. The examiner can normally be reached on Monday - Friday 8:00 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Rhonda Murphy

Application/Control Number: 09/977,984  
Art Unit: 2667

Page 12

Examiner  
Art Unit 2667

rlm

  
CHI PHAM  
PROVISORY PATENT EXAMINER  
1/23/06